

We claim:

1. An isolated nucleic acid molecule encoding a CARD3X-2 polypeptide comprising the amino acid sequence set forth as SEQ ID NO:197, or a domain of said  
5 polypeptide selected from a CARD domain, NACHT domain, and LRR domain.
2. The nucleic acid molecule of claim 1, which encodes a CARD3X-2 polypeptide comprising the amino acid sequence set forth as SEQ ID NO:197.
- 10 3. The nucleic acid molecule of claim 1, wherein the nucleotide sequence of said nucleic acid molecule comprises SEQ ID NO:196.
4. The nucleic acid molecule of claim 1, wherein said nucleic acid molecule is cDNA.
- 15 5. A vector containing the nucleic acid molecule of claim 1.
6. Recombinant cells containing the nucleic acid molecule of claim 1.
7. An oligonucleotide comprising at least 15  
20 contiguous nucleotides of the nucleic acid molecule of claim 3, or the complement thereof.
8. An oligonucleotide according to claim 7, wherein said oligonucleotide is labeled with a detectable marker.
- 25 9. An isolated CARD3X-2 polypeptide, comprising the amino acid sequence set forth as SEQ ID

NO:197, or a domain of said polypeptide selected from a CARD domain, NACHT domain, and LRR domain.

10. The isolated CARD3X-2 polypeptide of  
5 claim 9, comprising the amino acid sequence set forth as  
SEQ ID NO:197.

11. A method of producing a CARD3X-2  
polypeptide comprising expressing the cDNA of claim 4 in  
10 vitro or in a cell under conditions suitable for  
expression of said polypeptide.

12. An isolated anti-CARD3X-2 antibody having  
specific reactivity with the CARD3X-2 polypeptide of  
claim 9.

13. The antibody of claim 12, wherein said  
15 antibody is a monoclonal antibody.

14. A cell line producing the monoclonal  
antibody of claim 13.

15. The antibody of claim 12, wherein said  
20 antibody is a polyclonal antibody.

16. A method for detecting the presence of a  
CARD3X-2 polypeptide in a sample, comprising contacting a  
test sample with an antibody according to claim 12 or a  
25 recombinant phage, detecting the presence of an  
antibody:CARD3X-2 complex or recombinant phage:CARD3X-2  
complex, and thereby detecting the presence of a CARD3X-2  
polypeptide in said sample.

17. A method of identifying a CARD3X-2 binding molecule comprising:

(a) contacting the CARD3X-2 polypeptide of claim 9 with a candidate CARD3X-2 binding molecule;

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(b) detecting association of CARD3X-2 polypeptide with said CARD3X-2 binding molecule.

18. The method of claim 17, wherein the CARD3X-2 binding molecule is a CARD3X-2-associated polypeptide.

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19. The method of claim 17, wherein the CARD3X-2 binding molecule is a small molecule.

20. A method of identifying an effective agent that alters association of a NACHT-containing polypeptide with a NACHT-associated polypeptide (NAP), comprising the steps of:

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(a) contacting a NACHT-containing polypeptide selected from SEQ ID NOS:188, 189 and 197, and said NAP with an agent suspected of being able to alter the association of said NACHT-containing polypeptide and said NAP, under conditions that allow association between said NACHT-containing polypeptide and said NAP; and

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(b) detecting the altered association of said NACHT-containing polypeptide and said NAP, wherein said altered association identifies an effective agent.

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21. The method of claim 20, wherein said NAP is selected from CARD3X, CARD3X-2, Nod1, NAC, PAN2, NAIP and cyropyrin.

5           22. A CARD3X-2 mRNA targeting molecule, comprising a molecule selected from an anti-sense oligonucleotide, a ribozyme and an si RNA, wherein said molecule binds selectively to an mRNA corresponding to the nucleotide sequence referenced as SEQ ID NO:196, or a  
10       portion of said nucleotide sequence.